

**[0059] CLAIMS**

What is claimed is:

1. A computer system for providing a color solution to a customer, comprising:
  - 5 a first module located at a remote location and being adapted to receive a solution request from an operator; and,
  - a second module coupled to the first module and being located at a central location, the second module including a composite solution database and a search routine coupled to the composite solution database and being adapted to receive the solution request from the first module, the search routine being adapted to search the composite solution database and determine the color solution as a function of the solution request.
- 10 2. The computer system, as set forth in claim 1, wherein the first and second modules are coupled by a computer network.
3. The computer system, as set forth in claim 1, wherein the first and second modules are coupled via the internet.
- 20 4. The computer system, as set forth in claim 1, including a customer interface implemented on the first module.

21

5

10

15

15

20

**THE UNIVERSITY OF CHICAGO**

12. The computer system, as set forth in claim 11, wherein the color measurement consists of reflectance values.

5 13. The computer system, as set forth in claim 11, wherein the color measurement consists of tristimulus values.

14. The computer system, as set forth in claim 11, wherein the color measurement includes color space values.

10 15. The computer system, as set forth in claim 14, wherein the color space values represent luminous intensity, red/green appearance, and yellow/blue appearance.

15 16. The computer system, as set forth in claim 14, wherein the color space values represent lightness, chroma, and hue.

17. The computer system, as set forth in claim 1, wherein the solution request includes a color measurement of a sample and the second module  
20 includes a color measurement database, the second control module being adapted to store the color measurement thereon.

18. The computer system, as set forth in claim 17, wherein the color measurement database includes color measurement data obtained by inspectors.

5 19. The computer system, as set forth in claim 1, wherein the composite solution database includes at least one formulation for a plurality of colors.

10 20. The computer system, as set forth in claim 19, wherein the composite solution database includes a color measurement associated with each formulation.

15 21. The computer system, as set forth in claim 20, wherein the solution request includes a color code and a color measurement of a sample, and wherein the color solution is determined as a function of the color code and the color measurement.

20 22. The computer system, as set forth in claim 1, wherein the second module includes means for deriving a new color solution as a function of the solution request if an acceptable solution is not found in the composite solution database.

23. The computer system, as set forth in claim 1, wherein the second module includes means for performing a consistency check on the solution request.

5 24. The computer system, as set forth in claim 1, wherein the second module includes means for determining and employing acceptable tolerances for the color solution.

10 25. The computer system, as set forth in claim 1, wherein the solution request includes information identifying a source of the sample.

26. The computer system, as set forth in claim 1, wherein the solution request includes a desired paintline.

15 27. A computer system for providing a color solution to a customer, comprising:

a first module having a customer interface and being located at a remote location, the customer interface being adapted to receive a solution request from an operator; and,

20 a second module coupled to the first module and being located at a central location, the second module being adapted to receive the solution request, to perform a consistency check on the solution request and to responsively request clarification from the operator if the solution request is not

consistent, the second module including a composite solution database and a search routine coupled to the composite solution database, the search routine being adapted to search the composite solution database and determine the color solution as a function of the solution request.

5

28. The computer system, as set forth in claim 27, wherein the second module includes a customer and solution usage database, wherein the second module is adapted to store customer information thereon.

10

29. The computer system, as set forth in claim 27, wherein the solution request includes a color measurement of a painted part to be repaired and the second module includes a color measurement database, the second control module being adapted to store the color measurement thereon.

15

30. The computer system, as set forth in claim 27, wherein the second module includes means for deriving a new color solution as a function of the solution request if an acceptable solution is not found in the composite solution database.

20

31. The computer system, as set forth in claim 27, wherein the second module includes means for determining and employing acceptable tolerances for the color solution.

32. A computer based method for providing a color solution to a customer over a computer network, including the steps of:

receiving a solution request from an operator located at a remote location;

delivering the solution request from the remote location to a central  
5 location over the computer network;

searching a composite solution database and determining the color solution as a function of the solution request.

33. The computer based method, as set forth in claim 32, including the  
10 step of delivering the color solution to the operator at the remote location over the computer network.

34. The computer based method, as set forth in claim 32, including the  
15 step of providing a customer interface at the remote location.

35. The computer based method, as set forth in claim 32, including the step of storing customer information on a customer and solution usage database.

20 36. The computer based method, as set forth in claim 35, wherein the customer information includes information about the customer's use of the system.

37. The computer based method, as set forth in claim 35, wherein the customer information includes a customer identifier.

38. The computer based method, as set forth in claim 35, wherein the customer information includes a number of times the system has been accessed by the customer.

39. The computer based method, as set forth in claim 32, wherein the solution request includes a customer identifier.

10

40. The computer based method, as set forth in claim 32, including the step of taking a color measurement of a painted part to be repaired by a color measurement device, wherein the solution request includes the color measurement.

15

42. The computer based method, as set forth in claim 40, wherein the color measurement is comprised of reflectance values.

43. The computer based method, as set forth in claim 40, wherein the color measurement is comprised of tristimulus values.

20

44. The computer based method, as set forth in claim 40, wherein the color measurement includes color space values.



45. The computer based method, as set forth in claim 44, wherein the color space values represent luminous intensity, red/green appearance, and yellow/blue appearance.

5

46. The computer based method, as set forth in claim 44, wherein the color space values represent lightness, chroma, and hue.

47. The computer based method, as set forth in claim 32, wherein the solution request includes a color measurement of a painted part to be repaired and the method includes the step of storing the color measurement in a color measurement database.

48. The computer based method, as set forth in claim 32, wherein the composite solution database includes at least one formulation for a plurality of colors.

49. The computer based method, as set forth in claim 48, wherein the composite solution database includes a color measurement associated with each formulation.

50. The computer based method, as set forth in claim 49, wherein the solution request includes a color code and a color measurement of a painted

10

[illegible]

**H&H: 65,241-007**